

The Gene(sis) Project: A Laboratory for Arts-Based Civic Dialogue

Case Study: Henry Art Gallery

LYNN E. STERN

PREFACE

In April 2002, on the heels of the Human Genome Project’s historic announcement about the completion of a human genome “rough draft” and the publication of its initial analysis by scientists, Seattle’s Henry Art Gallery (“the Henry”) opened *Gene(sis): Contemporary Art Explores Human Genomics*, a national touring exhibition that explores the implications of human genome research on human life and understanding. *Gene(sis)* brings together more than 50 works of recent and new artwork representing artists’ explorations and imaginings of the social, ethical and economic ramifications of genetic and genome research. To spur dialogue among Puget Sound residents about the provocative and potentially polarizing issues the *Gene(sis)* artwork raises, the Henry, together with its project partners and community collaborators, devised and implemented a multi-faceted, cross-disciplinary series of public programs in conjunction with its exhibition. In doing so, the Henry created a “space” for public discourse around a timely and controversial civic issue for Seattle area residents: What is the meaning and impact of current genetic research with regard to our everyday lives?

Through the *Gene(sis)* project, the Henry sought to harness the power of contemporary visual art to elucidate and provoke dialogue about new developments in the science of human genomics. The Henry employed a range of approaches and formats to spark discussion on these themes within a gallery setting and at public programs throughout the city. The Henry’s exploration of various dialogue methods raised key questions about dialogue concepts and practices: What new innovations can be brought to conducting dialogue about art and, in this case, “controversial art?” How does art function as dialogue between artist and viewer? Does the viewer’s experience in grappling with the ideas evoked by a work of art constitute civic dialogue? And what do existing curatorial and education practices have to offer when designing opportunities for civic dialogue?

WHO OWNS YOUR DNA?

ARTISTS PROBE THE HUMAN GENOME'S IMPLICATIONS

A powerful statement can be made if you go in the trenches and you appropriate the same [scientific] tools. And what you say with those tools is a completely different diction, a completely different message, a completely different everything. You show that these tools are the instrument of fantasy. The tools are invested with ideological value. They come from a certain view of the world, but these are not issues that science is interested in talking about... This is the job of the artist. What artists do is social awareness, this inventiveness, this fantasy.

—Eduardo Kac,
Boston Globe (April 7, 2002)



Alba, the “Green Fluorescent Bunny” and transgenic artwork by Eduardo Kac.

Photo: Chrystelle Fontaine

The Henry Art Gallery: A Laboratory for Emerging Art Forms

The University of Washington’s Henry Art Gallery in Seattle is a nationally-recognized center for the exploration and advancement of contemporary art, design and visual culture. Founded in 1927 as the state of Washington’s first public art museum, the Henry has carved out a unique profile as an institution dedicated to pioneering the yet-to-be-charted frontiers of contemporary art. Central to the Henry’s mission is its role as a catalyst for the creation of new work in the visual arts, placing special emphasis on commissioning works by artists who are exploring the intersection of art and technology. To advance that vision, the Henry built a state-of-the-art gallery in 1997 to accommodate artists’ experimentation in the embryonic fields of video and digital media. In the words of the Henry’s director, Richard Andrews, the gallery serves “as a place for experimentation and to

house developing art forms, even though we are not even sure yet what those forms will be.”

Recognizing the power of contemporary art to provoke, challenge, and articulate fresh ideas around complex and often polarizing social issues, the Henry is equally committed to engaging audiences in the powerful experience of artistic innovation. Through a dynamic mix of exhibitions, education programs and public events, the Henry positions itself as public forum that helps communities in the Puget Sound region deepen their understanding of and response to ideas evoked by cutting edge art.

Evolution of the *Gene(sis)* Project (1999-2000)

With its finger on the pulse of artistic experimentation, the Henry was one of a handful of art museums whose artistic activity at the end of the 20th century reflected on and responded to recent trends in genetic and genomic research. That artistic exploration was spurred in large part by the formation in 1990 of the Human Genome Project (HGP), an international consortium of scientific laboratories engaged in a 15-year effort to map and sequence the human genome—the totality of genetic material that makes us human. In deciphering the code of human life, HGP held the promise of unraveling the mysteries of how the human body grows and functions. Knowledge harvested from the project would reap untold benefits for humankind, revolutionizing the fields of medicine, biology and psychology by offering new tools for improved

diagnosis of disease, detection of genetic predispositions to disease, and rational drug design and gene therapies. Its non-medical applications would contribute to a greater understanding of human evolution and anthropology, and lead to advances in the fields of DNA forensics, agriculture and environmental protection, among others.

But cracking the secrets of life also raises a thicket of social, legal and ethical questions. Many argue that genetic information and its uses are especially vulnerable to adverse refraction through the lenses of power, fear, social prejudice and economic interest. Will the gains that promise to heal diseases also give rise to designer babies, cloning and genetically modified “Frankenfood?” How will issues of privacy and fair use of genetic material be negotiated in the public policy arena? Will HGP’s findings revive the 19th century “science” of eugenics and foster new forms of genetic discrimination? And how will the commercialization of knowledge—such as the race among for-profit biotech firms to patent and copyright DNA information—affect the accessibility of data and materials for public health applications?

HGP and its broader implications have special resonance for the city of Seattle. A number of Seattle-based research institutions, including the University of Washington’s Human Genome Center, were members of HGP’s international coalition. Seattle has also staked its economic future on the region’s burgeoning biotech industry, making significant capital and infrastructure investments to raise Seattle’s profile as a leading hub for biotech research and innovation.

“HGP and its broader implications have special resonance for the city of Seattle.”

As the completion of the human genome “working draft” drew near, an increasing number of artists were creating genome-related work that grappled with the cultural and ethical implications of genetic engineering. In doing so, these artists were taking up the tools and materials of genetic researchers, turning their studios into “laboratories” to pursue these investigations.

Intrigued by this artistic trend and the genetic research that spawned it, the Henry’s associate curator Robin Held began a series of conversations in 1999 with artists, scientists, historians and biotechnology industry representatives to solicit their interest in organizing an exhibition that would explore HGP’s implications in light of present-day notions about human life and identity. That same year, with a planning grant from the National Endowment for the Arts, the Henry convened a working group of interested parties for a roundtable planning session to define the basic goals of collaboration and explore possible exhibition themes. The positive tenor of that gathering inspired the Henry to take this unprecedented cross-disciplinary endeavor to the next level. “There was a high level of conversation about possible collaborations, enthusiasm, good will and discourse,” recalls Held, “and we knew we had to do something with that energy.”

With input and guidance from the *Gene(sis)* working group, the Henry fleshed out a three-year project that would culminate in *Gene(sis): Contemporary Art Explores Human Genomics*, a major touring exhibition, featuring recent and newly commissioned genome-themed artwork. To facilitate the project’s planning and execution as a collective effort, it was structured to loosely mirror the laboratory model used in international efforts to investigate human genome sequencing. As Held describes that process, “Artists, scientific collaborators and museum professionals worked simultaneously in their own corners of the country, remained in regular contact via e-mail correspondence and phone conversations and held small group meetings.”ⁱⁱⁱ In that same vein, three new works commissioned by the Henry would be created by artists in collaboration with experts from various scientific fields.

What Can an Art Museum Contribute to Public Discourse about the Human Genome?

With anticipation building around the release of the human genome “working draft,” the Henry was keenly aware of the *Gene(sis)* project as a prime opportunity to focus public attention on the social, ethical and economic ramifications of biogenetics. In bridging the divergent spheres of art and science, as Robin Held explains, the Henry saw the exhibition’s potential to activate citizens’ engagement in a broader public discourse about the implications of genome research on their lives:

We’re trying to encourage dialogue, rather than keep art and science divided. One goal I have is for people to see that it isn’t a done deal. Citizens can be part of the conversation in genomics. Artists, naturally, don’t all agree on biotech issues, and several viewpoints are presented. But what is shown mirrors the potential impacts on our daily lives, and that’s worth talking about.ⁱⁱⁱ

To achieve that vision, the Henry mapped out an ambitious roster of public programs and events in conjunction with the exhibition, aimed at stimulating dialogue about these concerns among a broad cross-section of Puget Sound residents. As an affiliate institution of the University of Washington, the Henry was well-placed to harness the rich resources of UW’s academic community and bring a cross-disciplinary approach to the planning and execution of *Gene(sis)* programming. To extend the *Gene(sis)* project’s reach and impact beyond the UW campus, the Henry planned to partner with a range of Seattle-based organizations—from cultural institutions and arts groups to scientific institutes and public health agencies—to produce an eclectic mix of *Gene(sis)*-related activities.

“The scope of this project is clearly beyond the usual curatorial mandate of an art museum. A legitimate question to ask is: What can an art museum contribute—through its exhibition and public programs—to the larger discourse about the implications of human genomics on our everyday lives?”

In taking on the *Gene(sis)* project, the Henry sought to spur discussion about one of the Seattle community’s most complex and possibly controversial civic issues: What is the meaning and impact of current genetic research on our everyday lives? In doing so, the Henry confronted a set of institutional and philosophical challenges that it had never before faced, and had to ask itself some tough questions: What is the role of contemporary art in generating new ideas and in serving as a catalyst for discussion on civic issues? Does a “science-based” exhibition have a place in a contemporary art museum? And how can the Henry serve as a public forum for dialogue about difficult and potentially polarizing civic issues? Robin Held framed the Henry’s challenges in this way: “The scope of this project is clearly beyond the usual curatorial mandate of an art museum. A legitimate question to ask is: What can an art museum contribute—through its exhibition and public programs—to the larger discourse about the implications of human genomics on our everyday lives?”^{iv}

Artistic and Dialogic Intentions

Support from Animating Democracy in 2000 provided the Henry the opportunity to realize the *Gene(sis)* project’s wide-ranging public programs component, as well as to test its assumptions about the exhibition as a stimulus for civic dialogue and its own role in carving out a civic “space”—a public forum within the museum walls and outside them—for public discussion and debate.

The Henry’s primary artistic intent for the project was to organize a major touring exhibition of recent and newly-commissioned works that would elucidate ideas and provoke dialogue about

new developments in the science of human genomics. Underlying that intent was the Henry's assumption that contemporary art could make a unique contribution to a broader understanding of the complex ideas surrounding biotechnology and genomics. As one Henry staff member put it, "Visual metaphors in contemporary art can provide new ways of approaching this important civic issue and offer the general public a point of entry into these questions."^{iv} The Henry's second artistic interest was to explore through the *Gene(sis)* project the intersection of fine art and hard science. That artistic inquiry would be investigated most directly through the Henry's commissioning of three new works that artists would create in collaboration with scientists from the field of genomics.

In articulating the project's dialogic goals, the Henry envisioned the *Gene(sis)* project as a potent vehicle for increasing public awareness and involvement relative to human genome issues among a broad cross-section of Puget Sound residents. To advance that goal, the Henry undertook dialogue activities at two levels. On one level, the Henry focused on the experience and response of audiences to the *Gene(sis)* exhibition as a form of dialogue, modifying a variety of interpretive approaches to the visual arts experience to provoke questions and discussion about the artwork. On another level, the Henry employed a broad public engagement strategy to spur dialogue about the issues raised by *Gene(sis)* artwork. That approach was largely realized through the project's multi-faceted public program component, with activities that ranged from small gallery discussions and artists' talks to public symposia and other off-site events in collaboration with Seattle community partners. To expand the reach of dialogue activities in Seattle and cities on the national tour, the Henry created a teachers' curriculum guide and an exhibition "toolbox" aimed at encouraging subsequent *Gene(sis)* venues to replicate and expand the Henry's dialogue activities in their own communities.

Through *Animating Democracy*, the Henry also investigated in a systematic way the experience and responses of audiences to the *Gene(sis)* exhibition and/or participation in public programs, with the goal of gauging changes in the audiences' awareness and understanding of the issues involved in human genetics and biotechnology research. The Henry worked with *Animating Democracy* staff and consultants to develop an evaluation framework for that inquiry and analysis.

Finally, the premise of the Henry's orientation to arts-based dialogue would be based on the notion that the *Gene(sis)* artwork, either in its original form or in reproduction, would serve as the catalyst for dialogue. The Henry's curatorial staff provided substantial background and wall text for the viewer. Still, the Henry presented *Gene(sis)* in a neutral way—without an agenda or point of view—so as to provide audiences with the opportunity to make up their own minds about the provocative issues raised by the artwork.

IN THE PUBLIC EYE AND UNDER THE MICROSCOPE: THE HENRY ART GALLERY ENTERS INTO THE FRAY OF THE GENOMICS DEBATE

Scientific revolutions may start with dry, objective data, but their ultimate impact depends on human interpretation in a societal context. Scientific milestones set off a search, often a struggle, for the metaphors and images that will be used to connect the findings with our daily lives... [T]he struggle over the meaning of the human genome is already under way. The language and imagery will be important because it will shape society's choices in the coming decades.

—Dr. Eric S. Lander,
New York Times (September 12, 2000)

In June 2000, midway through the organization of the *Gene(sis)* project, the Human Genome Project and Celera Genomics, a private firm, jointly announced the completion of a “working draft” of the human genome. This stunning news intensified public scrutiny and debate, in the U.S. and globally, about genomic research. It also brought a renewed sense of urgency and import to the Henry’s role, through the *Gene(sis)* project, as a catalyst for public discussion about the implications of the human genome. As one Henry staff person recalls, “The issue not only became more concrete for the public—suddenly the word ‘genome’ appeared regularly in the popular press—but also more polarized. The Henry located itself in the center of this speculation with the *Gene(sis)* exhibition and by developing and co-sponsoring more public programs than the museum had ever conducted. We were suddenly in the public eye and under the microscope.”

“The issue not only became more concrete for the public—suddenly the word ‘genome’ appeared regularly in the popular press—but also more polarized... We were suddenly in the public eye and under the microscope.”

Primary *Gene(sis)* Partners and Roles

Against this backdrop, the Henry convened a two-day gathering, “Forum on Art and Human Genomics,” in December 2000 as a follow-up to the 1999 planning session. The forum was designed to present and elicit feedback on the three new works commissioned by the Henry for the *Gene(sis)* exhibition: Paul Vanouse’s *Relative Velocity Inscription Device*, Shawn Brixey and Richard Rinehart’s *Chimera Obscura*, and Jill Reynolds’ *Family Tree II*. The forum was also intended to revisit key issues identified in the 1999 planning session, revise and refine them, and select five core themes for the focus of the Henry’s public programs.

In addition to artists, scholars and scientists, attendees at the forum included key Henry staff and the primary community partners responsible for the development and production of the *Gene(sis)* public program. The Henry team included *Gene(sis)* curator Robin Held; Sara Pasti, director of curatorial affairs; Tamara Moats, curator of education; and Felicia Gonzalez, foundation and government relations manager. The Henry’s four primary community partners were Nancy Pearl, executive director of the Washington Center for the Book at the Seattle Public Library (WCB), an organization that broadens and deepens appreciation for literature through book discussions and other literary and humanities programs; Margit Dementi, associate director of UW’s Walter Chapin Simpson Center for the Humanities, which supports interdisciplinary activities in the humanities; Richard Francois, director of development and community relations at the Seattle Biomedical Research Institute (SBRI), a non-profit research institute that also promotes broad-based education about the value of fundamental research and improved global health; and Maynard Olson, director of the UW Human Genome Center, one of the nation’s leading research institutions dedicated to the sequencing of the human genome.

Forum participants generated five core themes that provided the conceptual framework for developing public programs in conjunction with the exhibition’s presentation at the Henry:

- “Paradigms Lost and Found,” the potential impact of recent genome research on notions of self, family, race and ethnicity;
- “Designer Bodies,” the implications of genetic engineering and genetic intervention on disease treatment, human biodiversity and species boundaries;
- “Bioethics and Public Policy,” implications of the control of genetic information in creating definitions of normalcy and discrimination;

- “Public Conceptions and Misconceptions about Human Genomics,” the influence of education, media and the development of language on the public understanding of human genomics; and
- “The Concept of Aesthetic Elegance in Art and Science,” concepts and processes shared by art and science.



Family Tree II. Jill Reynolds 2002.
Multi-trunked tree, petri dishes, glass rods, yeast
Photo Credit: Richard Nicol

Based on the five key themes outlined at the December forum, the Henry and its primary community partners pooled their collective experience and resources to devise and facilitate an engaging, wide-ranging series of dialogue activities that would appeal to diverse constituencies. As an affiliate of the Seattle Public Library, WCB was well-positioned to introduce these themes into the larger public realm through dialogue activities and informational resources geared to lay audiences. Modeled on the success of its nationally-acclaimed “If All of Seattle Read the Same Book” project, WCB would host monthly discussion groups on selected books at the Library’s 25 branches throughout the *Gene(sis)* exhibition. It would also develop a reading list and study guides on *Gene(sis)*-related books for use by library-sponsored and independent book clubs throughout Seattle. As co-host of a symposium to be held as part of the exhibition’s 2002 opening, the Simpson Center would serve as liaison to UW faculty and staff, identifying and securing participation for the symposium from a broad cross-section of the academic community. Concurrent with the exhibition, the Simpson Center would also offer UW undergraduate and graduate students two cross-disciplinary, team-taught courses on *Gene(sis)*-related themes. Drawing on its network in the biotechnology field, SBRI would identify and provide access to business leaders, policy makers, ethicists and international representatives of social sciences for the development of the public programs component.

In addition to the *Gene(sis)* project’s primary partners, a number of community collaborators planned to develop programs that would complement and make reference to *Gene(sis)* artwork and public program themes. These organizations included Richard Hugo House; a non-profit literary center for practicing writers; the Fred Hutchinson Cancer Research Center; Sustainable Science Institute, a nonprofit dedicated to improving public health worldwide; Cornish College for the Arts, and the Washington State Board of Health.

The Henry Brings the DNA Debate to Life: The 2002 Premiere of *Gene(sis)*

Gene(sis): Contemporary Art Explores Human Genomics, which premiered at the Henry on April 6, 2002, brought together more than 50 recent and new works by 28 U.S. and European artists. In grappling with the human genome and its implications, the artists had explored nearly every avenue of artmaking—paintings, drawings, photographs, performance, Internet-based art and installation works—and employed a range of materials, from microscopes and Petri dishes to paper coffee cups and frogs preserved in glass jars. A number of works were interactive, allowing museum visitors to influence the process of genetic mutation and observe the results. From glowing bacteria to “manimals” and genes for sale, each piece touched on important issues surrounding the remarkable developments in human genomic research over the past decade.

As described Robin Held in her introductory essay to the exhibition, *Gene(sis)* was organized into four thematic sections: SEQUENCE, work that explores the rhetoric and media representations of genomics; BOUNDARY, artists’ investigations of the now permeable boundaries between species; SPECIMEN, work that engages questions of DNA ownership,

personal privacy and the management of genetic information; and SUBJECT, artists' re-imaginings of individual subjectivity, family and human "nature" in the wake of recent genomic developments.

The new works generated by the *Gene(sis)* project formed the focal point of the exhibition. Jill Reynolds' *Family Tree II*, in the thematic section SUBJECT, is a tree-like installation wrapped in a web of glass rods connected to each other by small Petri dishes that contain growing yeast. Highlighting the interconnectedness of life, the work illuminates one of the earliest insights garnered from human genome research: The human genome shares surprising similarities with the genomes of other species, such as the mouse, roundworm, fruit fly and yeast. Paul Vanouse's *Relative Inscription Device*, also in the SUBJECT section, is a multimedia installation employing game theory to compare and contrast historical issues of eugenics and contemporary notions of human biodiversity (or "race"). Using DNA samples from his family members, Vanouse constructed a "race" about race, in which a genetic sequencing gel serves as a track for the competition as the genetic species "fight" for the lead. In *Chimera Obscura*, new media artists Shawn Brixely and Richard Rinehart created a large-scale maze in the image of a human thumbprint that can be navigated remotely by Internet visitors. As a key work under the section of SEQUENCE, this work reflects the artists' understanding of the process of mapping of the human genome.



Chimera Obscura. Shawn Brixely and Richard Rinehart 2002.
Photo Credit: Richard Nicol

Another new work featured at the *Gene(sis)* opening was the U.S. premiere of *Gen Terra* by the Critical Art Ensemble (CAE), a collective of five artists dedicated to exploring the intersections between art, technology, critical theory and political activism. Described by CAE as "a theater of transgenics," *Gen Terra* employs genetic materials and lab practices with the direct participation of the audience in order to examine fears about recent transgenic initiatives. Lab-coated technicians invite audiences to play "transgenetic roulette" with Petri dishes on a revolving platform, potentially releasing benign transgenic bacteria into the air. Audience members are also encouraged to make and store their own transgenic bacteria.

In the wake of the September 11th tragedy and subsequent anthrax scares, *Gen Terra* proved to be one of *Gene(sis)*'s most provocative and controversial pieces. Concerns about possible exposure by the public to transgenic bacteria required sensitive negotiations between the Henry, UW's Environmental Safety Department and the Office of Risk Management in order to present the work—a deliberative process that played out in real life some of the fears and anxieties about biological agents that *Gen Terra* aimed to evoke and interrogate.

Engaging Multiple Approaches and Formats to Spark Dialogue

Concurrent with the exhibition's four-month run, the Henry, its partners and community collaborators presented a robust public programs schedule. Many of these programs aimed to spark discussion on various levels about the exhibition and the issues involved in genetic research. In the public programs component, the organizers sought to explore the subject matter through multiple lenses—literature, film, and dance, among others—and made use of a variety of formats, such as hands-on demonstrations, symposia, readings, public meetings, gallery

talks, and formal presentations with facilitated dialogues sessions. To plan and facilitate the public programs component, the Henry hired a half-time staff person, Bridget Nowlin, who served as *Gene(sis)* program coordinator and worked closely with Curator of Education Tamara Moats.

The key activities illustrate the breadth of *Gene(sis)*-related programs:

“The Permeable Membrane: A Dialogue on Art and Issues” (March 23, 2002), resented in cooperation with the Cornish College for the Arts.

Choreographer/ dancer Liz Lerman and members of the Dance Exchange conducted a Critical Response Process workshop, a movement-based approach that engaged participants in a exploration of the layers of meaning and response to artist Eduardo Kac’s *Gene(sis)*.

“Paradigms Lost and Found: The Implications of the Human Genome Project” (April 5-7, 2002), co-sponsored by the Walter Chapin Simpson Center for the Humanities. This two-day symposium brought together *Gene(sis)* artists, scientists and scholars for presentations and panel discussions that explored the potential social and ethical impact of genetic research. Panels were interspersed with 30-40 minute “dialogue sessions” led by a professional dialogue facilitator. During the lunch break, audience members could take a 15-minute guided tour of the exhibition.

Washington State Board of Health Genetics Task Force Public Meeting (April 12, 2002). The day-long public hearing presented testimony from leading scientists, public health experts, and biotechnology representatives on three issues: Future Directions of Academic and Basic Research in Human Genetics; Future Directions of Genomics in Public Health Practice; and Private Ventures in Genomic Diagnostic and Treatment Technologies. The meeting also invited public comment on genetics-related privacy and/or discrimination issues. Meeting participants and task force members toured the *Gene(sis)* exhibition.

Facilitated Book Group Readings (April 16 and May 9, 2002). Through its network of more than 150 book groups, WCB explored two titles in association with *Gene(sis)*: *Frankenstein* by Mary Shelley and *Mendel’s Dwarf* by Simon Mawer.

***Gene(sis)*: A Bridge Between Art and Science in the Classroom (April 16, 2001)** This was an evening for educators to tour the *Gene(sis)* exhibition and discuss the use of the *Gene(sis)* teacher curriculum guide assembled by the Henry.

***Gene(sis)* Town Hall Meeting at Town Hall Seattle (May 4, 2002), co-sponsored by Town Hall Seattle.** The meeting featured presentations on the future of human genetic research by Lee Hartwell, 2001 Nobel Laureate, UW Genetics Professor and president of the Fred Hutchinson Cancer Research, and Leroy Hood, geneticist and director of Seattle’s Institute for Systems Biology. Presentations were followed by a discussion led by a professional dialogue facilitator.

“Genetic Screenings” Film Series (April-May 2002), organized by the Pacific Film Archive at the University of California Berkeley. This six-part series offered a cinematic survey of features, shorts and documentary films that have engaged the human genome either as focus or foil. The series also included the premiere at the

Seattle International Film Festival of *Teknolust* (2002), a cyber-comedy about a female scientist (Tilda Swinton) who clones three selves.

Author Series: A Conversation on Bioethics and Public Policy (April 12 and May 24, 2002), co-sponsored by UW Forum at the Evans School and the University Book Store. These events featured discussions with the authors on two new books on genomics: *Redesigning Humans: Choosing Our Children's Genes* by Dr. Gregory Stock, and *Mapping Human History: Discovering the Past Through Our Genes* by Steve Olson.

DNA Precipitation Display (April-August, 2004), organized by the Fred Hutchinson Cancer Research Center and the Sustainable Science Institute. This interactive display, offered regularly throughout the exhibition's run in the Henry's Educational Studio, allowed visitors to participate in a demonstration of the precipitation of DNA.

"Inquiry Through Writing" Classes (January – June 2002). The Richard Hugo House offered three creative writing classes: "The Art of Science," in which writers examined the similarities of scientific and artistic processes; "Writing the Thing," which encouraged writers to focus on the "thingly" side of human nature, DNA; and "Sequence, Syntax, Language and Perception," in which writers explored the question, "Are we made up of genes or stories?" Spring classes included visits to the *Gene(sis)* exhibition.

University of Washington Courses (spring quarter 2002), sponsored by the UW Walter Chapin Simpson Center for the Humanities. Two cross-disciplinary, team-taught courses were offered to UW undergraduates and graduate students: "In Vivo: Traversing Scientific and Artistic Observations of Life Science"; and "Science, Technology and the Body."

Gene(sis) as a Laboratory for Dialogue

The Henry's participation in *Animating Democracy* constituted the museum's first formal encounter with concepts of dialogue and civic dialogue practice in its work. Embracing the spirit of *Animating Democracy* as a laboratory, the Henry committed itself to learning and experimenting with selected arts-based dialogue concepts and practices. It adapted standard museum education methodologies, extending their capacity to engage people in dialogue within the gallery setting. For the Henry curators, the intent of civic dialogue The Henry also tried out dialogue methodologies that might be considered "unconventional" within the context of a visual arts museum. Henry director Richard Andrews notes that, through its participation in *Animating Democracy*, "the Henry grew and stretched beyond our institutional parameters and beyond our comfort zone. [The *Gene(sis)* project] opened the museum to exploration, play, dialogue and performance in ways that other projects have not made possible." As host to *Animating Democracy's* May 2002 Learning Exchange, the Henry provided fellow Lab participants with an opportunity to experience first-hand a number of dialogue approaches employed by the museum in the *Gene(sis)* project.

"Embracing the spirit of Animating Democracy as a laboratory, the Henry committed itself to learning and experimenting with selected arts-based dialogue concepts and practices. It adapted standard museum education methodologies, extending their capacity to engage people in dialogue within the gallery setting."

In exploring audience experience and response to the *Gene(sis)* artwork, the Henry brought to bear several interpretive approaches that were used in guided gallery talks for general audiences and educator-led visits for student groups. Building on the strength of the museum's educational department, the Henry developed and documented in its *Gene(sis)* teacher curriculum guide a participatory viewing experience adapted from the Visual Thinking Strategy (VTS), a method of inquiry developed by the Museum of Modern Art. As the Henry's education curator Tamara Moats explained at the Seattle Learning Exchange, VTS draws out viewer response through inquiry and explores information about an artwork meaningful to the viewer. Described by the Henry staff as an "interactive looking experience," VTS initiates dialogue by posing simple questions that encourage viewers to bring their own personal associations, stories and interpretations to the work. This questioning strategy leads viewers in progressive steps to explore the complex and sometimes disturbing ideas embedded in the work. (See sidebar.)

VISUAL THINKING STRATEGY ADAPTED FOR DIALOGUE

A questioning strategy for artist Catherine Chalmers' *Transgenic Mice* (2002), excerpted from the Henry's *Gene(sis)* teacher curriculum guide, offers a snapshot of how the Henry's version of VTP guides the viewer(s) in a dialogue around the artwork, its interpretation and the ethical issues raised by the work. Chalmers documents the production of genetically engineered mice, a burgeoning industry fueled by recent genetic discoveries. Her photographs spotlight the "mouse ranch" industry, calling into question the ethics of animal research. Suggested discussion questions for this piece include:

Art:

- Describe what you see in these photographs. How many mice? What size? Texture? Shape? Color?
- Note the way in which the artist has framed the mice, and their size within the frame. How does this affect the portrayal of the mice?
- Note the manner in which they have been photographed (glossy paper, professionally lit). How does this style (glossy, blown-up, closely cropped, highly detailed) influence your response to the image?

Interpretation:

- Are these mouse portraits emotional or scientific? Why or Why not?
- What do you think is the artist's intent by photographing these mice?
- Does she seem for or against animal experimentation? What clues does the artwork give you to support your opinion?

Ethics:

- How are these mice normal? Abnormal?
- Is it right to use animals in research to explore human illness and its treatments?
- If they are not used for research, what about the humans who might suffer and die because of lack of treatment?
- Let's say insects or yeast were used for research. Would you feel differently?
- Is it any more ethical to experiment on one type of living creature than another?
- Where do we draw the line?
- As an artist, Chalmers also benefits indirectly from the research these mice undergo (she presumably makes money from her art, and gets notoriety). What are the issues she as an artist should be concerned about when working with such subject matter?

At the Seattle Learning Exchange, the Henry staff demonstrated its version of VTS for Lab participants. Selma Holo, museum studies scholar and Director of the University of California Fisher Gallery, describes how the Henry tour leaders' questioning strategy gradually led to the ethical and moral dilemmas at the heart of *Gene(sis)*:

This approach allowed visitors to verbalize their concerns generated by the most radical art and its attendant scientific ideas. The VTS method was handled flexibly and generously, in that the tour leaders explained the basic scientific concepts so that an informed conversation could begin. Simultaneously Socratic and teacherly, the Henry version of VTS elicited heartfelt and smart responses, and was able to handle both the nervousness and curiosity generated by the disturbing images on display. Questions about the ethics and morality of both artists and scientists who undertake work with this material began to emerge and a level of inquiry about the important issues raised by the curatorial thesis was encouraged.^{vi}

In contrast to Holo's observations, some LE participants expressed concern that the Henry's version of the VTS method merely led participants to intended conclusions rather than creating a setting for a viewer's own discovery about the artwork. They suggested that this questioning strategy assumes there are "right answers" to which a viewer can be guided by asking the right questions.

Another interpretive approach to *Gene(sis)* artwork was offered by "The Permeable Membrane: A Dialogue on Art and Issues." This workshop, conducted by dancer/choreographer Liz Lerman and several of her company's dancers, incorporated elements of the Critical Response Process (CRP), a multi-step format for conducting conversations about art that Lerman originally developed as a way for an artist to engage in dialogue with a group of responders about a work-in-progress. Lerman led workshop participants in a movement-based dialogue exploring meaning and response to Eduardo Kac's *Gene(sis)* installation. Workshop participants experienced elements of CRP combined with techniques that "tap the body's capacity for holding memory and gauging intellectual and emotional reactions." As the Henry notes in its final report to Animating Democracy, this type of movement-based inquiry rarely, if ever, occurs within an art museum setting.

At the Seattle Learning Exchange, Lerman adapted elements of "The Permeable Membrane" to conduct a gallery dialogue around Kac's installation for LE participants. In her description of Lerman's gallery dialogue, Selma Holo suggests that the physicality of the process helped individual participants unlock deeper emotional responses to the work. As Holo describes it, Lerman's choreography of each participant's emotional response—in the physical form of an individual's gesture—transformed the very private experience of viewing the artwork into a public communal one:

"Lerman's choreography of each participant's emotional response—in the physical form of an individual's gesture—transformed the very private experience of viewing the artwork into a public communal one."

... [B]ased on participants' experience of Kac's installation, Lerman asked "What was meaningful to you?" Individuals spoke, then, recalling movement and gestures from certain participants' responses, Lerman engaged the group in performing those gestures together, eventually creating an entire movement phrase to music. Harvesting gestures from individual experiences simultaneously created a deeply personal and collective

experience in an arts space where collective experience is not the norm. For some, acting out the "angst and tension" that Kac's piece provoked relieved these feelings, making it possible to talk more easily about the issues. For others, the gestures enhanced listening and gave deeper meaning to words.^{vii}

For *Gene(sis)*-related activities that took place outside the gallery, the Henry adapted conventional formats and techniques to spur discussion around the themes raised by the *Gene(sis)* artwork. In designing the project's public events, such as the symposium and town hall meeting, the Henry placed special emphasis on creating "space" for public dialogue sessions within the program format. The Henry also secured the services of Heather Andersen, a professional dialogue facilitator to lead these sessions and train museum staff and community partners in dialogue facilitation. For example, the "Paradigms Lost and Found" symposium interspersed panel discussions with 30-40 minute "dialogue sessions" led by professional dialogue facilitator. In structuring the dialogue sessions, a key consideration was how to break out of the standard "Q & A" format and create an environment that encouraged all members to voice their ideas and concerns. In its final report to *Animating Democracy*, the Henry staff explained the thinking behind the symposium's dialogue sessions:

An important aspect of the symposium was to provide opportunities for the audience to dialogue with both the presenters and one another. The structure for these dialogues was carefully thought out in order to avoid the standard question and answer format. Rather, we facilitated the dialogues so that people would feel comfortable addressing one another as well as the presenter. One way this was achieved was to bring the presenter(s) down from the stage and into the audience. This arrangement stressed the idea that everyone's point of view was equal and all were welcome to share. We also engaged a professional dialogue facilitator for the program and also had her train museum staff on dialogue facilitation so that the format these sessions took was clear and that all could come, listen and be heard.

In structuring the off-site *Gene(sis)* dialogue activities, the Henry also made a deliberate effort to link these programs to the artwork whenever possible by referencing the work and/or building gallery tours into the format, such as the 15-minute guided tours during the lunch break at "Paradigms Lost and Found." The symposium utilized the genome theme as the foundation for a broad exploration of topics in which artists and scientists had mutual interest. Panels combined scientists and artists who shared perspectives on the ethics, politics, and social implications of genome research, and the relationship between arts and science. The discussion occasionally referenced the artworks and noted the way that the art both illustrated and challenged genome research and biogenetics. With the exception of artist Eduardo Kac's presentation, specific works were not viewed or specifically discussed in panel sessions. The audience for the event was small, but people fully participated in the discussion.

The Henry also arranged exhibit tours for writers participating in the Hugo House's "Inquiry Through Writing" classes. As part of the Genetics Task Force Public Meeting, members of the task force, representatives from the biotech industry and others testifying at the meeting toured the exhibition as part of the day's agenda—a rare example of injecting contemporary art into a public policy setting.

To articulate dialogue goals during the planning for *Gene(sis)* and later gauge audience experience and response to the *Gene(sis)* exhibition and related public programs, the Henry—in consultation

with Animating Democracy’s evaluation consultant—developed a detailed logic model that outlined the project’s activities, correlating each key activity to desired immediate and long-term outcomes and impacts. The Henry also devised several evaluation tools, such as an exhibition survey/summations questionnaire, and adapted an audience/participant questionnaire developed by Animating Democracy’s evaluation coaches.

EMERGENT QUESTIONS AND OUTCOMES

Taken as a whole, the *Gene(sis)* project is a remarkable example of an art museum heralding a timely civic issue of profound social and ethical consequences for its community and marshalling its considerable resources to bring that issue to the forefront of public attention. The project had the cumulative effect of heightening awareness and understanding among Seattle area

“For the Henry curators, the intent of civic dialogue often appeared to be at odds with their goal of allowing the artwork to “speak for itself,” at times creating tension regarding whether the dialogue was driving the art.”

residents about the promise and potential hazards that the Human Genome Project holds for our daily lives. By virtue of its three-city tour, the *Gene(sis)* project has also contributed to the national conversation about genomics and genetic exploration. If the meaning of human genome, as geneticist Dr. Eric Lander suggests, will ultimately be determined in the arena of art and culture, then the thought-provoking metaphors and images emanating from the *Gene(sis)* project may well form the basis for our understanding of these scientific findings and shape our social and ethical choices in the years ahead.

What Degree of Mediation Between the Artist and Viewer is Appropriate? What Constitutes Civic Dialogue?

The *Gene(sis)* project stretched the Henry to consider ways to engage audiences in civic dialogue and, in doing so, raised key questions about arts-based dialogue concepts and practices. For the Henry curators, the intent of civic dialogue often appeared to be at odds with their goal of allowing the artwork “speak for itself,” at times creating tension regarding whether the dialogue was driving the art. That tension manifested itself in the Henry’s approach to the interpretation of the *Gene(sis)* artwork, which stressed the museum’s curatorial/educational viewpoint that the work be presented in an unobtrusive, neutral way in order to encourage unmediated dialogue between the artist and viewer. The Henry staff saw this approach as a way of empowering audiences to draw their own conclusions about the provocative issues raised by the artists.

The Henry’s approach stood in stark contrast to other museum-based Lab projects that presented artwork dealing with difficult and controversial subject matter. At the other end of the spectrum was the Jewish Museum’s approach to its presentation of *Mirroring Evil: Nazi Imagery/Recent Art*, which maximized contextualization of the artwork for audiences. In doing so, Jewish Museum staff posited a different curatorial/educational perspective: that an abundance of contextual materials would promote, rather than inhibit, dialogue among viewers. These divergent approaches raise a central question about arts-based dialogue practice relevant to all Lab participants: What degree of mediation is appropriate to ensure that the art—particularly challenging conceptual art—will effectively stimulate civic dialogue? While Lab participants were divided on this question, the consensus seemed to be that, particularly with regard to artwork that has the potential to be controversial and/or polarizing, too much information rather than too little would better serve the goal of promoting dialogue and mitigating the potential for misunderstanding.

What Constitutes Civic Dialogue?

Deliberations about the appropriate level of mediation led Seattle participants to ponder the larger question of how art functions as “dialogue” between artist and viewer. Does the “interchange of ideas” between the artist and viewer through an artwork constitute civic dialogue? In this respect, the Henry’s explorations of viewer experience and response to the *Gene(sis)* artwork shed a light on the “dialogue with self” that is inherent in experiencing art and grappling with the ideas the artwork evokes. While dialogue is generally defined as an exchange of ideas and opinions two or more persons, does it necessarily need to be a collective experience? And what is the place of “dialogue with self” in relation to civic dialogue? As the Henry staff put forth through the *Gene(sis)* project, “dialogue with self” may well be part of the continuum toward civic dialogue.

“The Henry’s explorations of viewer experience and response to the Gene(sis) artwork shed a light on the “dialogue with self” that is inherent in experiencing art and grappling with the ideas the artwork evokes.”

Artistic and Dialogic Outcomes

In view of the *Gene(sis)* project’s primary artistic intent—to organize a major touring exhibition that would elucidate and provoke dialogue about new developments in human genome research—it was highly successful on many levels. The exhibition was of high artistic merit and critically well-received. It generated significant local and national media attention, with coverage in major newspapers as well as in leading cultural and scientific journals and magazines. *Gene(sis)* was even the subject of a feature article in the *The New York Times Arts and Leisure* section on May 26, 2002.

Gene(sis) was also successful in its intent to serve as an entry point for lay audiences into highly technical materials with potentially profound social implications. Its four themes—SEQUENCE, BOUNDARY, SPECIMAN, and SUBJECT—provided the viewer with a useful framework for understanding and exploring the artwork in relation to the scientific findings to which the artist was responding. While audiences may have found some pieces less accessible than others, and a

“Whether this exhibit touches your ‘spooky’ nerve, or your aesthetic sensibility or your logician’s cortex, there is bound to be a piece here that provokes you.”

few decidedly disturbing, all the artwork provoked viewers to consider genomic research. As one viewer commented, “Whether this exhibit touches your ‘spooky’ nerve, or your aesthetic sensibility or your logician’s cortex, there is bound to be a piece here that provokes you.”

In terms of dialogic outcomes, the *Gene(sis)* project was particularly effective in its engagement of a large portion of the Seattle community in considering the significance of human genome research as an important topic of public conversation. Judging by attendance at the *Gene(sis)* premiere—1,200 people attended the opening, and the symposium on the opening weekend was sold out—the project captured the interest of local residents and, through the exhibition and public programs, provided a civic “space” for further learning and dialogue about these issues.

In design and implementation, the public programs, like the exhibition itself, offered the community multiple entry points into the topic of human genome research. The variety of programming—facilitated book readings, author talks, film screenings, academic gatherings and creative writing courses, as well as the symposium and public meetings—appealed to diverse audiences, such as academics, students, writers, policy makers and the general public. The Henry’s conscious integration of structured dialogue elements in selected programs provided the

opportunity for dialogue among participants. Through the Genetics Task Force public meeting the Henry also attempted to link art to public deliberations shaping policymaking around genetic research.

Another significant outcome was the number of valuable products developed in conjunction with the *Gene(sis)* project. The Henry's educational staff developed an exemplary 65-page curriculum guide with appendices for use by teachers in the classroom and in conjunction with school visits to the exhibition. This interdisciplinary guide—with 19 slides containing background information on *Gene(sis)* artists and artwork, discussion questions, a glossary and a bibliography—prepares teachers to tackle the subject of art and genomics. The guide was made available to public school teachers in the Puget Sound region and to a consortium of member museums of the American Association of Museums.

In lieu of a printed catalogue, the Henry created an accessible, well-designed CD-ROM exhibition catalogue that enables the user to view the *Gene(sis)* artwork in a three-dimensional, interactive manner. In addition to artists' biographies, critical essays and information resources, the CD-ROM also includes video clips of performances by the Critical Art Ensemble and artists interviews. The *Gene(sis)* website, designed as an online companion to the exhibition and multilayered resource center, is available on the Internet. It is being used regularly as a valuable

record of the exhibition and its themes, as well as a resource for current issues, such as the investigation of CAE artist Steve Kurtz's artistic practices and use of biological materials. As *Gene(sis)* travels from museum to museum, the website has been tailored to each host's configuration and local needs and concerns. A toolbox was created to document the extensive programs and provide background on the artists and artworks, as well as the wall texts. It also served to assist tour site organizers in developing their own arts-based civic dialogue programs.

Given the project's ambitious size and scope, there were inevitably a number of missed opportunities. While the Henry and the *Gene(sis)* working group conceptualized a compelling framework for the public programs component—"Paradigms Lost and Found," "Designer Bodies," "Bioethics and Public Policy," "Public Conceptions and "Misperceptions about Human Genomics" and "The Concept of Aesthetic Elegance in Art and Science"—these five "Public Programs Issues" were not explicitly linked to the actual programming, nor were they explored with the depth and rigor that might have been possible. Another opportunity not fully explored was the dialogue that occurred between the artists and scientists who collaborated on the three works commissioned by the

Henry for the exhibition. In view of the Henry's artistic interest in exploring the intersection of fine art and hard science, documenting the dialogue between artists and scientists may well have illuminated these junctures in new ways and shed light on the dialogic process by which the artwork was created. Finally, while the Henry invested significant resources in the development of a logic model and evaluative tools to measure audience response, no one has analyzed the data. If evaluated in some meaningful way, the data could indicate which dialogue formats were successful, the ways in which audiences interacted with and responded to the exhibit and public programs, and the impact that project activities had on public awareness and understanding of the issues *Gene(sis)* raised.

Overall, the *Gene(sis)* project heightened public awareness about human genome research and, through the scope of its community-wide public programming, offered multiple ways for the



No-Die. Maira Kalman 2000.
Paper coffee cup
Photo Credit: Robert Glasgow

Seattle community to engage in these issues. Because of national media attention and the U.S. tour, the exhibition's impact continues to ripple through communities beyond Puget Sound. The *Gene(sis)* project also underscores the role that contemporary art can play in drawing public attention to human genome research as a civic issue in a uniquely compelling way, and in contributing to a richer and broader understanding and discussion of the complex ideas surrounding biogenetics.

Lynn E. Stern is a New York-based writer and independent consultant with 15 years' experience in the nonprofit sector. She advises philanthropic organizations and not-for-profit groups in strategic planning, program design, management and evaluation. Fluent in Russian, Lynn is a specialist in cultural exchange between the U.S., Central and Eastern Europe and Russia. She served as project specialist to the Ford Foundation's Media, Arts and Culture unit where she oversaw its capacity-building initiatives in the arts, international creative collaboration and arts-based civic dialogue. She currently serves as consultant to the Foundation's electronic media policy portfolio.

ⁱ *Seattle Magazine*, April 2002

ⁱⁱ Robin Held, *Generating Gene(sis): A Contemporary Art Exhibition for the "Genomic Age,"* p. 5

ⁱⁱⁱ *Seattle Magazine*, April 2002

^{iv} Robin Held, *Generating Gene(sis): A Contemporary Art Exhibition for the "Genomic Age,"* p. 2

^v Henry Art Gallery application to *Animating Democracy*, 2000. Unless otherwise noted, quotes are drawn from the Henry reports and supplemental materials to *Animating Democracy*.

^{vi} Selma Holo, *Conducting Civic Dialogue: A Challenging Role for Museums*, p. 4

^{vii} Selma Holo, *Conducting Civic Dialogue: A Challenging Role for Museums*, p. 4